

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

August 18, 1980

Mr. James P. O'Reilly, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Region II - Suite 3100  
101 Marietta Street  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

YELLOW CREEK NUCLEAR PLANT UNITS 1 AND 2 - NRC-OIE REGION II LETTER  
RII:WPA 50-566/80-03 AND 50-567/80-03 INSPECTION REPORT - REVISED RESPONSE  
TO INFRACTION

The subject letter dated February 28, 1980, cited TVA with one infraction in accordance with 10 CFR 2.201 on failure to establish adequate measures to control radiography. The initial response to this infraction was submitted on March 24, 1980. Supplemental reports were submitted on April 28, 1980, and June 10, 1980. Enclosed is a revised final report.

The final report on this infraction has been revised to reflect TVA's decision to reradiograph an additional seven welds. Also, NRC-OIE Inspector J. Coley requested that the scope of this infraction be expanded to cover the additional problem of film darkening. TVA expects to submit another report on the film darkening problem discussed in the enclosure by October 27, 1980.

If you have any questions concerning this matter, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L.M. Mills, Manager  
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Jr., Director (Enclosure) ✓  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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ENCLOSURE  
YELLOW CREEK NUCLEAR PLANT UNITS 1 AND 2  
FAILURE TO ESTABLISH ADEQUATE MEASURES TO CONTROL RADIOGRAPHY  
REVISED RESPONSE TO NRC INFRACTION  
50-566/80-03-01 AND 50-567/80-03-01

Infraction

As required by 10CFR50, Appendix B, Criterion IX, and as implemented by Tennessee Valley Authority (TVA) Topical Report TVA-TR-75-A1, Section 17.1A.9, "Measures shall be established to assure that special processes, including---nondestructive testing are controlled and accomplished---in accordance with applicable codes---." ASME Code Section II, paragraph X3334.4 requires that penetrameters be placed adjacent to the weld seam; in addition paragraph NE-5211 requires full radiography for longitudinal butt welded containment joints.

Contrary to the above, on February 7, 1980, seven radiographs of containment structural butt welds exhibited penetrameters and shims extending into the weld obscuring part of the area of interest.

Corrective Actions Taken and Results Achieved

All radiographs made before February 22, 1980 (6,849), have been reexamined for similar deficiencies, and an additional 102 were found and nonconformed.

Reevaluation of the 102 radiographs by Chicago Bridge and Iron (CBI) initially nonconformed resulted in the determination that shims were not overlapping into the weld in 95 cases, and only 7 of these welds required reradiographing. TVA reevaluation of these 95 cases has resulted in seven more welds which TVA has requested be reradiographed. As stated in TVA's March 24, 1980, letter to J. P. O'Reilly, two of the radiographs cited by the NRC (seam A1 increments 1 to 2 and seam A2 increments 20 to 21) were reevaluated and found to be acceptable. Thus, only 19 welds had to be reradiographed.

In the course of the film review, an additional problem was revealed in that some of the film had undergone a severe darkening after being examined and accepted by CBI, TVA, and ANI. The film identified on this problem has also been nonconformed and reported in NCR YC-088.

A representative of the film manufacturer (GEVAERT) has been requested to assist in determining the cause. Samples of the film were taken, and all film nonconformed will be reprocessed, reevaluated, and reshot if required.

Steps Taken to Avoid Further Recurrence

In order to prevent a recurrence, the film interpreters and radiographers have been instructed in the requirements of shim placement.

In addition, CBI has issued a special written instruction informing all radiographers and film interpreters on proper placement of shims. This Special Instruction No. 5 will become part of the Special Instruction Folder No. 3.0 which is used in training new radiographers and film interpreters.

Date of Full Compliance

Six additional welds identified by TVA were reradiographed. The seventh weld was removed for penetration and thus did not require reradiographing. All radiographs, both those reradiographed and others, are acceptable from penetrameter concern.

On the concern with film darkening on radiographs, TVA expects to submit another report by October 27, 1980.